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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,367	11/27/2001	Robert D.P. Hei	163.1585US01	9026
23552	7590	12/04/2003	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			ANTHONY, JOSEPH DAVID	
			ART UNIT	PAPER NUMBER

1714

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/995,367	HEI ET AL.	
	Examiner	Art Unit	
	Joseph D. Anthony	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) 10-57 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

1. Claims 10-57 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant election of Group I, claims 1-9 in the letter of 10/23/03 is acknowledge.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1 and 5 are indefinite because the claims fail to define what the "EO", "PO", and "BO" groups are in the nonionic surfactant formula. The specification does not suffice to make the metes and bounds of these groups definite and clear. Applicant's specification on page 7, lines 5-6, states: "EO comprises ethylene oxide, PO comprises propylene oxide and BO comprises butylenes oxide moieties or residues". "Comprises"? What else besides ethylene oxide, propylene oxide and butylenes oxide do EO, PO and BO comprise?

Independent claims 1 and 5 are also indefinite in regards to the metes and bounds of the nonionic surfactants that are actually encompassed by the listed

formula for the nonionic surfactants. It must be clearly noted that while the examiner was reading applicant's specification, specifically the nonionic surfactants listed in Table 1 on page 23 of the specification, that only nonionic surfactants #2 and #11 are deemed to be encompassed by the nonionic surfactant formula of independent claims 1 and 5. Yet applicant's specification makes clear that the nonionic surfactants, as set forth in Table 1, are nonionic surfactants that are intended to be encompassed by the nonionic surfactant formula as set forth in independent claims 1 and 5. As such, there is a big problem.

As an example, take nonionic surfactant #1, as set forth in Table 1. Surfactant #1 has alternating ethylene oxide groups and propylene oxide groups with benzyl groups as the capping groups. According to the nonionic surfactant formula of independent claim 1 and 5, if subscript o for butylene oxide group(s) and subscript n for propylene oxide group(s) fall within the following range: $1 \leq o + n \leq 20$, then R is a C₁₋₁₈ alkyl group and R' is a benzyl group. The use of the word "is" mandates that the R group is a C₁₋₁₈ alkyl group and can thus not be a benzyl group as it is in surfactant #1. As such, surfactant #1 is not encompassed by said formula.

As another example, take surfactant #3 from Table 1. If $o + n \leq 1$, which is the case for surfactant #3 since it has no propylene oxide groups or butylene oxide groups, then, according to said nonionic surfactant formula, R' is a -H group. The problem here is that R' is not a -H group in surfactant #3 but is rather

a benzyl group. Surfactant #3 is further outside said formula in that the alkylaryl group is bonded to an oxygen atom which in turn is bonded to an ethylene oxide group. Nowhere in said formula is this permitted. Surfactant #3 **is** thus not encompassed by said nonionic surfactant formula as set forth in independent claims 1 and 5.

Claims 3-5 and 8-9 are further indefinite in regards to the use of the word "composition" after the word "peracid" and "surfactant". The examiner is not sure why the word "composition" is being used. This causes confusion in regards to the actual concentration ranges being claimed for the peracid and surfactant components. As an example, dependent claim 3 states that the composition of claim 2 is one that comprises about 0.1 to 50 weight percent of a peracetic composition and about 0.1 to 30 weight percent of a surfactant composition. Said concentration limitations do not clearly define what the actual peracetic acid concentration is or what the actual surfactant concentration is in the claimed aqueous peracid treatment composition as a whole. After all, if the peracetic acid composition is only 1% weight peracetic acid and this composition is added to make an aqueous peracid treatment composition at an amount of 0.1 to 50 weight percent, then the actual peracetic acid concentration would be within the range of 0.001 to 0.5 weight %. Such low actual peracetic acid concentrations are not deemed to be consistent with applicant's intended final aqueous peracid treatment compositions.

At this point the metes and bounds of just what is being claimed is very indefinite to say the least. As such, the examiner will take the broadest reasonable interpretation of applicant's claims in light of applicant's specification for all following prior-art rejections. Since applicant's nonionic surfactant formula of independent claims 1 and 5 is so indefinite the examiner will assume that said formula actually encompasses a far broader range of nonionic surfactants than the literal interpretation of said formula would warrant, since applicant does just that as shown in applicant's Table 1. Likewise since applicant fails to define what the actual peracid concentration is in the peracid composition component and the actual surfactant concentration is in the surfactant composition component, the examiner will assume that they are in fact basically unlimited.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, and 5-8 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Godin et al. U.S. Patent Number 6,168,808 or Godin et al. U.S. Patent Number 6,444,230.

Both Godin et al patents teach synergistic aqueous compositions of comprising:

a) from 0.0005% to 20% by weight peracetic acid, b) acetic acid, c) hydrogen peroxide, d) an amine oxide, and e) up to 2.5% by weight of at least one nonionic surfactant, see the abstracts. The nonionic surfactants can be chosen from a number of different types with a preferred class of nonionic surfactant being a compound with formula (II), see column 4, lines 11-40 of the '808 patent and column 4, line 47 to column 5 line 8 of the '230 patent. Some of the surfactants within formula (II) are deemed to directly read on applicant's preferred nonionic surfactants when a "benzyl" group is used as a capping group. Both patents disclose commercially available nonionic surfactant sold under the name Triton DF 12 and Triton CF 10 which are benzylic ether of alkoxylated alcohols, see column 5, lines 1-8 of '808 and column 4, lines 38-41 of '230. The further addition

of a stabilizer is also disclosed, see column 6, lines 53-54 of '808 and column 6, lines 60-61 of '230.

Applicant's claims are deemed to be anticipated over the examples of each patent when a nonionic surfactant is actually added to the aqueous peracetic acid containing composition. It seems the examples use a nonionic surfactant under the trade name Genapol 2908D which is according to formula (II) but does not have a benzyl capping group, see column 8, lines 30-68 and column 4, lines 60-67 of '808. In the alternative, it would have been obvious to one having ordinary skill in the art to use a nonionic surfactant containing a benzyl-capping group in lieu of one that does not contain such a capping group since such benzyl-capping group containing nonionic surfactants (e.g. Triton DF 12 and Triton CF 10) are clearly disclosed by both patents.

7. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godin et al. U.S. Patent Number 6,168,808 or Godin et al. U.S. Patent Number 6,444,230.

The Godin et al patents have been described above and they differ from applicant's claimed invention in that there is no direct teaching (i.e. by way of an example) to where an sequestering agents is actually contained in the peracid containing aqueous composition. It would have been obvious to one having ordinary skill in the art to use the direct suggestion of each patent as motivation

to add a sequestering agent to their compositions, see column 6, lines 53-54 of '808 and column 6, lines 60-61 of '230.

8. Claims 1-9 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lentsch et al. U.S. Patent Number 6,257,253 or Baum et al. U.S. Patent Number 6,302,968.

Lentsch et al and Baum et al both teach aqueous sanitizing compositions comprising: 1) peroxyacetic acid, 2) acetic acid, 3) hydrogen peroxide, 4) nonionic surfactant(s) and 5) sequestering agent(s), see the abstracts and tables in column 11 of the '968 patent and the table in column 10 of the '253 patent. The disclosed nonionic surfactants can be selected from those that have a benzyl capping end group, see column 8, line 25 to column 9, line 18 (note lines 55-58) of the '253 patent, and column 9, line 19 to column 10, line 12 (note lines 49-52) of the of the '968 patent. Applicant's claims are deemed to be anticipated over Working Example 1 of each patent.

In the alternative, it would have been obvious to one having ordinary skill in the art, using the disclosure of either patent as motivation, to actually use a nonionic surfactant containing a benzyl capping group in lieu of ones that do not contain such a benzyl capping group since both patents clearly disclose that nonionic surfactants containing benzyl capping group are well within the scope of their claimed inventions.

9. Claims 1-2 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Harvey et al. U.S. Patent number 5,756,139.

Harvey et al. Teaches egg washing and disinfecting process. One taught process is to make an aqueous solution comprising peracetic acid and a nonionic surfactant that is then applied to the surface of the eggs, see abstract, and example 4. Applicant's claims are deemed to be anticipated over example 4 even though it is unclear if the nonionic surfactant sold under the trademark "proxitane 0510" is one that reads on applicant's claimed nonionic surfactants. Such as issue is really moot due to the serious 35 USC 112 issues, raised above, concerning the metes and bounds of what nonionic surfactants are really being claimed according to the formula as set forth in independent claims 1 and 5.

In the alternative, it would have been obvious to one having ordinary skill in the art, using the disclosure of the patent as motivation, to actually use a nonionic surfactant containing a benzyl capping group in lieu of ones that do not contain such a benzyl capping group, since the patent discloses a general formula for nonionic surfactants useful in the patented invention that is deemed to extensively overlap in scope of applicant's claimed nonionic surfactant formula of claims 1 and 5, see column 2, lines 26-60 and column 6, lines 1-50. Please note that within the patent's taught general nonionic surfactant formula, R' can be selected to be an aryl group having 6 to 10 carbon atoms.

10. Claims 3, and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harvey et al. U.S. Patent number 5,756,139.

This rejection builds on the rejection made above. Harvey et al has been described above and differs from applicant's claimed invention in that the concentration of the peracetic acid component in the aqueous composition of example 4 is below applicant's claimed concentration limit. It would have been obvious to one having ordinary skill in the art to use a concentration of peracetic acid that is within applicant's claimed concentration range since Harvey directly claims a peracid concentration within the range of about 10 ppm to 10,000 ppm, see claims 13, 15 and 17-18.

Prior-Art Cited But Not Applied

11. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

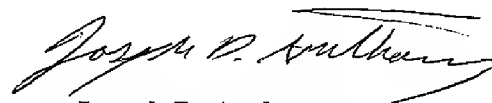
Examiner Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (703) 308-0446 until 12/04/03; after 12/04/03 my new telephone number will be (571) 272-1117. This examiner can normally be reached on Monday through Thursday from 7:35 a.m. to 6:00 p.m. in the eastern time zone. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703)

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306-2777. The centralized FAX machine number is (703) 872-9306. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner. Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0651. The receptionist is located on the 8th floor of Crystal Plaza 3 (e.g. CP-3) and will be the welcome point for all visitors to the building.



Joseph D. Anthony
Primary Patent Examiner
Art Unit 1714

11/26/03